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United States Patent [19]

Bucala et al.

[11] Patent Number:

6,030,615

[45] Date of Patent:

Feb. 29, 2000

[54] COMBINATION METHOD FOR TREATING DISEASES CAUSED BY CYTOKINE-MEDIATED TOXICITY

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Mitchell; Jurgen Bernhagen; Thierry F. Calandra, all of New York; Anthony Cerami, Shelter Island, all of

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[21] Appl. No.: 08/471,546

[22] Filed: Jun. 6, 1995

Related U.S. Application Data

[60] Division of application No. 08/462,350, Jun. 5, 1995, which is a continuation-in-part of application No. 08/243,342, May 16, 1994, which is a continuation-in-part of application No. 08/063,399, May 17, 1993, abandoned.

[51] **Int.** Cl.⁷ **A61K 39/395**; A61K 38/19; C07K 14/52; C07K 16/00

[52] U.S. Cl. 424/156.1; 424/154.1; 424/156.1; 424/156.1; 424/158.1; 424/172.1; 424/85.2; 530/387.1; 530/388.1; 530/388.23; 530/388.24; 530/388.75; 530/389.2; 530/351

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(List continued on next page.)

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[57] ABSTRACT

There is disclosed a method for treating an individual having a disease caused by cytokine-mediated toxicity comprising administering to the individual an effective amount of (a) an antibody that binds to an MIF polypeptide, wherein the MIF polypeptide has a molecular weight of about 12.5 kDa in combination with (b) anti-TNF α , anti-IL1, anti-IFN- γ , IL-1RA, a steroid, à glucocorticoid, or IL-10.

3 Claims, 22 Drawing Sheets